STATE OF CONNECTICUT

Long Term Acute Care Hospital Demonstration Projects

Report to the Public Health Committee

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1.0 Introduction

Sec 19a-617b of the Connecticut General Statutes required the Office of Health Care Access (OHCA), in consultation with the Departments of Public Health (DPH) and Social Services (DSS), to authorize up to four demonstration projects allowing chronic disease hospitals to establish and operate long-term acute care hospitals (LTACHs) or satellite facilities. The purpose of the demonstration projects was to enable a study of service quality, patient outcomes and cost effectiveness of using such hospitals and facilities for patients in need of long-term hospitalization within an acute care setting that require twenty-four-hour on-site physician care not available in skilled nursing facilities. Chronic disease hospitals were required to apply to OHCA by January 1, 2005 for a Certificate of Need (CON).

OHCA received and approved two demonstration project proposals; one on January 16, 2004 for a 28-bed $2,102,718 project at St. Francis Medical Center (SFHMC) in Hartford managed by the Hospital for Special Care (HSC) and a second on May 27, 2004 for a 25-bed $4,063,000 project at Saint Mary's Hospital in Waterbury managed by Gaylord Hospital, Inc.[1]

2.0 Background

Title XVIII of the Social Security Act allows LTACHs to provide hospital care for medically complex adult patients with an average inpatient stay exceeding twenty-five days and who require care not available in skilled nursing facilities post acute care. These patients would otherwise have stayed at acute care hospitals as high-cost outliers prior to transfer to skilled nursing facilities. An LTACH, licensed by Medicare as a short-term acute care hospital, can either be:

- a first generation freestanding hospital not located in another hospital or within 250 yards of the hospital's main building or other campuses, a variation more common in the 1980s; or
- a second generation hospital-within-a-hospital (HwH), which is a separate and distinct hospital located physically within another hospital or on its campus. Most new LTACHs use the HwH model.

According to the Centers for Medicare and Medicaid Services (CMS) 1994 regulations, an HwH must have its own governing body and hospital staff, which includes a chief executive officer, a chief medical officer, and medical staff. An HwH is responsible for its basic functions independent of its host hospital and leases space and purchases ancillary services from its host hospital valued at less than 15% of the HwH's inpatient operating cost. In August 2004 CMS added the "25% rule" to limit inappropriate admissions. The rule is effective in FY 2008 through a phase-in and requires that an HwH Medicare patient load consist of no more than 25% of referrals from its host hospital. However, if the HwH is the only one in an urban area and its principal local transferring hospitals account for at least one-quarter of acute care discharges in the area or if the HwH is located in a rural area, then the threshold for that HwH is 50%. CMS is

[1] Certificate of Need (CON) Docket Numbers 03-30150 and 03-30195, respectively. For copies of the CON decisions see http://www.ct.gov/ohca/ or call (860) 418 7001.

proposing extending the 25% rule to almost all referring hospitals. CMS reimburses HwHs exceeding the thresholds at a lesser rate then normal.

Before 1997, Medicare reimbursement rates for an LTACH were based on its average allowable cost per discharge, which were subject to Tax Equity and Fiscal Responsibility Act of 1982 (TEFRA) limits. Since then, under the Balance Budget Act of 1997 (BBA), CMS adopted the long-term care prospective payment system (LTC-PPS), which is a fixed rate per patient hospital diagnosis related group (LTC-DRG) reimbursement system. LTC-DRGs are short-term acute care hospital DRGs weighted to reflect resource intensity needs of long-term care patients or case-mix adjusted. The new rates applied immediately to LTACHs that began operation after September 1997; for those existing before that date, CMS allowed a five-year phase-in period ending in October 2006, during which those facilities could opt to be reimbursed based on CMS pre-determined blends of the cost-based system and the LTC-DRG payment system or on the LTC-DRGs system only.

Under the Medicare, Medicaid and SCHIP Balanced Budget Refinement Act of 1999 (BBRA) and Benefits Improvement and Protection Act of 2000 (BIPA), CMS adjusted the LTC-PPS to make it "budget neutral." In that, estimated total payments made under the LTC-PPS had to be equal to those based on average per-discharge cost. In 2003, CMS began to update LTC-DRGs annually based on claims data; operating and capital-related costs associated with medically complex patient stays; and established July 1 of one year to June 30 of the following year as an LTACH rate year.

In theory, Medicare Part A pays for most of LTACH care, but, a significant number of LTACH patients by virtue of their age and level of impairment or income tend to be dually eligible. Dually eligible patients have Medicare and Medicaid as their primary and secondary payers, respectively.

Federal Public Law 90-248 Section 402(a) allowed the creation of LTACH demonstration projects in states.

3.0 Long Term Acute Care Hospitals in Connecticut

Sec. 19a-617b of the Connecticut General Statutes authorized the creation of up to four LTACH demonstration projects in the state. Each project was to be owned and controlled by a non-profit chronic disease hospital and located as a satellite or within a licensed short-term acute care general or children's hospital. Also, each project had to be Medicare certified as a long-term acute care hospital under Title XVIII of the Social Security Act.

Section 19a-617c of the Connecticut General Statutes provides that Medicaid payments for LTACH services are not differentiated from standard hospital inpatient payments except that payments could be shared if the LTACH beds are operated by a separate entity. The statute further provides that days of care for a patient initially treated in a hospital's acute inpatient bed that transfers to an LTACH would be treated as a single admission for Medicaid reimbursement purposes

Although OHCA approved two HwH demonstration projects, only the 28-bed facility at SFHMC in Hartford owned by the HSC was established; it has been operational since September 10, 2004. DSS authorized Medicaid certification of the HSC new beds in May 2006 and pays the facility the Medicaid inpatient chronic disease hospital (CDH) per diem rate for services provided to eligible patients; the rate for the period July 1, 2006 through June 30, 2007 is $1,069.57 per day.

The CMS 25% rule effectively eliminated any economic advantage that would have occurred from establishing an LTACH, so the proposed Gaylord/Saint Mary's demonstration project did not come to fruition, and other hospitals that had been investigating the potential of establishing a program lost interest. Mid-size to small hospitals in the state did not consider the program as an option because there were no potential benefits from economies of scale.

3.1 Utilization of Hospital for Special Care Long Term Acute Care Hospital

In order to measure effectiveness of LTACHs as part of the health care system in the state, OHCA required the host hospital of each demonstration project to provide information on a number of "LTACH eligible" patients to serve as a control group. SFHMC selected records of 187 adult medically complex patients who could have been LTACH-eligible if an LTACH existed in fiscal year (FY) 2002. These patients cost $9.5 million (or 53% of charges) to treat, were in acute care for 7,013 days altogether, one-third received intensive care and about one-half were mechanically ventilated prior to discharge. This report attempts to utilize information about this group and the patients discharged from the HSC LTAC to assess if access to acute care in the area has improved through freed up intensive care unit beds, if there are improved clinical outcomes for long stay patients, and if the transferring hospitals have realized any cost savings since the HSC LTACH began operation in September 2004.

3.1.1 Utilization Statistics

In the twenty-four months following the start of operations, the HSC LTAC treated and discharged 196 patients in 6,471 patient days, which is one-half of projected discharges and two-thirds of projected patient days for the period, respectively. As many as sixteen Connecticut acute care hospitals transferred patients to the facility. Typically, about nine hospitals utilize the services in a given year, although in the twenty-four months most transfers were from the host hospital, St. Francis (58%) and Hartford (21%), (Table 1)

Tab1e 1:Acute care hospitals that transferred discharges to Hospital for Special Care Long Term Acute Care, September 2004 through September 2006

Transferring Hospital	FY 05 (7 months)	FY 06 (12 months)	FY 07 (5 months)	Total (24 months)
St. Francis	56%	55%	67%	58%
Hartford	17%	25%	18%	21%
Other[2]	27%	19%	16%	21%
Total	100%	100%	100%	100%
# of Discharges	48	103	45	196

Source: *Long Term Acute Care Hospital Discharge Data reported to Office of Health Care Access by Hospital for Special Care*

[1] LTACH FY (or fiscal year) is April 1 of one year through March 30 of the subsequent year.

[2] Includes the 14 hospitals - Sharon, Johnson, Bradley, Charlotte Hungerford, Rockville, St Mary's, Middlesex, Windham, Yale, William W Backus, Manchester, Bristol, New Britain and John Dempsey

The majority (71%) of the LTACH patients originated from the proposed primary and secondary service areas for the facility. The HSC LTAC anticipated the payer mix to be one-fifth Medicare, one-half Medicaid and one-fifth commercial insurance in the first three years of operation but that has not occurred to date. Since DSS was not able to authorize Medicaid certification of new beds until May 2006, this prevented the facility from admitting Medicaid patients. Instead, over 70% of the patients admitted were Medicare-covered and the facility met its projected payer mix for commercial insurance in FY 2006 only. Between October 1, 2006 and December 31, 2006, the facility provided 438 days of care to an average of 4.76 Medicaid patients.

Table 2: HSC LTAC Three-Year Projected and Actual Payer Mix

	Projected			Actual		
Payer	Year 1	Year 2	Year 3	FY 05 (7 months)	FY 06 (12 months)	FY 07 (5 months)
Medicare	21.6%	23.2%	23.7%	85.4%	71.8%	73.3%
Medicaid	54.4%	53.0%	52.6%	0.0%	0.0%	6.7%
TriCare	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total Government	**76.0%**	**76.2%**	**76.3%**	**85.4%**	**71.8%**	**80.0%**
Commercial Insurance	22.4%	22.3%	22.2%	14.6%	25.2%	20.0%
Self-Pay	1.6%	1.5%	1.5%	0.0%	1.0%	0.0%
Workers' Compensation	0.0%	0.0%	0.0%	0.0%	2.0%	0.0%
Total Non-Government	**24.0%**	**23.8%**	**23.7%**	**14.6%**	**28.2%**	**20.0%**
Uncompensated Care	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total Payer Mix	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Source: *Hospital for Special Care Long Term Acute Care*

3.12 Impact on Access to Acute Care

As predicted, a large portion (two-thirds) of all LTACH patients admitted during the twenty-four month period were elderly and about 30% of the patients were transfers from intensive care units of the transferring hospitals. Based on acute care hospital discharge data available to OHCA, acute care discharges, patient days and intensive care days have been increasing concurrently since the LTACH began operation; there is insufficient data to enable isolation of increases attributable to the addition of LTAC beds to the system in the area

3.13 Cost Savings of Transferring Patients to the LTACH

In FY 2002 the average charge for caring for an LTACH-eligible patient at SFHMC as an outlier, was $113,401 for 37.5 days at $3,024 per day (Table 3). In FY 2006, a similar patient transferred from SFHMC to HSC LTAC for long-term acute care, was charged $127,635 for 43.1 days at $2,964 per day. If SFHMC had cared for this patient for the entire 43.1 days at the daily rate of $5,139, it would have charged $221,226 or $93,631 (73%) more. The savings for transferring the patient from SFHMC to HSC LTAC was 76.1% per day, a decline from $5,139 to $1,229. The average daily savings for the twenty-four months was 72.3%.

Table 3: Charges for Hospital for Special Care Long-Term Acute Care

Hospitalization at SFHMC	Control Group FY 02 (12 months) [1]	FY 05 (7 months)	FY 06 (12 months)	FY 07 (5 months)
Average Charge for Hospitalization	$113,401	$128,573	$93,885	$112,837
ALOS (days)	37.5	26.2	15.6	20.9
Average Charge per Day	$3,024	$4,351	$5,139	$4,931
N =	187	27	57	30
Hospitalization at HSC LTAC				
Average Charge for Hospitalization	n/a	$37,348	$33,750	$46,529
ALOS (days)	n/a	27.3	27.5	33.9
Average Charge per Day	n/a	$1,366	$1,229	$1,373
N =	n/a	27	57	30
Total Acute Care Hospitalization				
Average Total Charge for Hospitalization	$113,401	$165,921	$127,635	$159,366
TLOS (days)	37.5	53.5	43.1	54.8
Average Charge per Day	$3,024	$3,099	$2,964	$2,908
Average Charge per Day				
SFHMC	$3,024	$4,351	$5,139	$4,931
HSC LTAC	n/a	$1,366	$1,229	$1,373
HSC LTAC Savings per Patient per Day	n/a	$2,985	$3,910	$3,558
HSC LTAC Savings percentage	n/a	68.6%	76.1%	72.2%

Source: *Hospital for Special Care Long Term Acute Care and St. Francis Medical Center FY 2002 Control Group Data*

[1] In FY 2002, average charge per day and per patient were $2,569 and $96,333 respectively. The two charges were adjusted using the annual growth rate of the Medicare Cost Report 90th percentile cost per discharge for the last four years to obtain rates for FY 2006 rates.

3.14 Clinical Outcomes for LTACH Patients

Faster weaning from ventilators for ventilator dependent patients relative to what occurs in general acute care settings and improved functional status are two measures of improved clinical outcomes. While about one-half of the general acute care control group for FY 2002 was ventilator dependent, there is insufficient information available about this group to enable comparison of outcomes with those of the HSC LTAC discharges. However, the National Association of Long Term Hospital (NALTH) provides data for patients in a similar setting. The HSC LTAC discharges were medically more complex patients than those in the NALTH research patients, because they had three times as many comorbidities as the latter, but slightly more of the HSC LTACH patients were successfully weaned off ventilators before discharge, 56.3% compared to 54.1% (Table 3). Also, comparatively more had "good functionality" or were at least ambulatory and independent at the time of discharge. Far fewer HSC LTAC patients were transferred to skilled nursing facilities (SNF) than the control group and NALTH patients post acute care, 20.4% compared to 39% and 37.3%, respectively.

Table 4: Improved outcomes compared with similar patients in long term acute care settings

	Short-term Acute Care Control Group FY 02[1]	HSC LTAC FY 06	NALTH Data FY 06
Sample Size	187	196	1,419
Average # of Comorbidities	8 5	8.5	2 6
Average LOS at acute care (days)	37 5	19.5	33 9
Average Age	63 35	70 0	71 8
Gender (Male/Female)	48 1% / 51 9%	58.7% / 41.3%	50 1% / 49.9%
Vent Weaning Rate	47% on vent	56 3%	54 1%
"Good" Functionality at LTAC Discharge[2]	n/a	32 0%	30 7%
LTAC Average LOS (days)	n/a	33.0	40.0
Home discharge from LTAC	10 7%	31 1%	28 9%
SNF discharge from LTAC	39 0%	20.4%	37 30%
Mortality Rate from LTAC	17 60%	13.3%	25.2%
1 year Survival Rate	n/a	50 9%	35.9%
Cost[3] of Acute Care (Average per bed)	$3,024	$4,897	$3,968
Cost[3] of LTAC Care (Average per patient)	$113,401	$42,099	$63,723

Source: St Francis Hospital FY 2002 Control Group Data, Hospital for Special Care LTAC Data, CHEST articles by Scheinhorn DJ, Hassenpflug MS, Votto JJ, et al. Ventilator-dependent survivors of catastrophic illness transferred to 23 long-term care hospitals for weaning from prolonged mechanical ventilation. Chest 2007; 131:76-84 and Scheinhorn DJ, Hassenpflug MS, Votto JJ, et al Post-ICU mechanical ventilation at 23 long-term care hospitals: a multicenter outcomes study Chest 2007; 131:85-93

[1] For FY 2002, average cost of care per bed and per patient were $2,569 and $96,333 respectively. The rates were adjusted using the annual growth rate of the Medicare Cost Report 90th percentile cost per discharge for the last four years to obtain FY 2006 rates.

[2] Zubrod scores 0 to 2, indicate patient is fully active, restricted in strenuous activity or ambulatory and capable of self-care but not work

[3] Cost refers to charges

The in-hospital mortality rate was lower for HSC LTAC patients than for similar patients in short-term acute care, 13.3% versus 17 6%. The rate for HSC LTAC was also approximately half that of the NALTH patients who were in a comparable setting. The one-year survival rate after discharge for the HSC LTACH discharges was 1.5 times the national level. While the average acute care charge per bed at HSC LTAC was higher than the nation's as a whole, the average charge associated with a patient transferred to the HSC LTAC was one-half of a short-term acute care stay and lower than a stay in a similar setting elsewhere in the nation.

Physician and patient satisfaction are additional measures of improved clinical outcomes. According to DPH, from interviews conducted in unannounced and routine visits to the facility, none of the patients or staff have made complaints about care or conditions at the facility nor have there been violations of Connecticut laws observed.

4.0 Findings

1. Although as many as sixteen hospitals transferred patients to the HSC LTACH, transfers from the host hospital, SFHMC, continue to be the majority. In addition to SFHMC, Hartford Hospital transferred a significant number of patients to the LTACH; as a result adult residents of the area were the dominant users of the services.

2. Acute care discharges and days and intensive care days for the area increased, but there are insufficient data to determine how much of this is attributable to the LTACH.

3. There is significant savings associated with transferring eligible patients to an LTACH.

4. Most of the patients that were transferred to the HSC LTAC experienced varying levels of improved clinical outcomes in terms of liberation from mechanical ventilation, functional status and one-year survival after discharge.

5. On these bases, it appears the HSC LTAC adds value to the health care system in the area